BRIDGEWATER GROUP, INC.

Attachment B - Sampling and Analysis Program Felton Property

November 20, 2015

This document presents the sampling and analysis program for the Felton Properties property within Basin 18 in the Burgard Industrial Park (BIP) in Portland, Oregon (Property) (Figure B-1 and Figure B-2). This document is an attachment to the October 16, 2015 *Basin 18 Supplemental Source Control Evaluation Sampling and Analysis Plan* (Basin 18 SSCE SAP). The Basin 18 SSCE SAP describes the

- Overall objectives of the Basin 18 SSCE;
- Basin 18 chemicals of interest (COIs);
- Specific sampling and analysis methods for soil and storm water; and
- Sampling results reporting.

This attachment describes the specific sampling locations and media for the Property.

Pathway Analysis

The only potential pathway identified from the Property to the Willamette River is the storm water pathway. The Property is located more than 1200 feet from the Willamette River. Thus, direct release of erodible soil, groundwater, and overwater activities are not material pathways for migration of chemicals of interest (COIs) from the Property to the river. Groundwater sampling and analysis previously performed along the Willamette River noted low concentrations of COIs and provides another line of evidence that groundwater migration from the Property is not a material COI pathway.

Storm water runoff from the Property is collected in catch basins and roof drains and conveyed to OF18 at the head of the International Terminal slip located about 1200 feet northwest of the Property. Almost all of the catch basins are within the northern portion of the Property, which is almost entirely covered with buildings and asphalt pavement. The building roofs consist of built-up roofs with a tar or composite surfaces. Two oil/water separators are located in the northern portion of the Property. Only four active catch basins drain the southern portion of the Property where the ground surface consists of bare ground and gravel. Catch basins are fitted with fabric filter inserts and included in a periodic maintenance program. However, given the presence of the unpaved ground surface, there is some potential for erodible soil to enter the catch basins.

A manhole connecting the storm water conveyance pipes to downstream sections of the Basin 18 storm water system is noted on North Sever Road in historical drawings but is not evident on the current North Sever Road surface. Figure B-2 shows the general layout of the storm water collection and conveyance system at the Property.

Supplemental SCE Sampling Tasks

The following Basin 18 supplemental SCE sampling tasks will be performed to assess the potential for storm water from the Property to be a material pathway for COIs to migrate to the Willamette River:

- Separator solids sampling;

- Roof drain storm water sampling; and
- Storm water pathway erodible soil sampling.

Each of these is described below. Figure B-2 shows the proposed SCE sample locations.

A video survey and geophysical survey will be performed as part of the Dunkin & Bush property sampling (Attachment A to the Basin 18 SSCE SAP) prior to initiating the Property sampling tasks. The results of the initial tasks may note more representative storm water sampling locations on the Property. Any modifications to this sampling plan based on the results of the Dunkin & Bush work will be discussed with DEQ prior to performing the Property sampling work.

Separator Solids Sampling

If sufficient solids are present in the separators at the time of sampling (i.e., sufficient accumulated solids to fill the necessary laboratory containers with a representative sample), solids samples will be collected from the two oil/water separators located in the northern area (Figure B-2). The purpose of these samples is to assess whether storm water solids in the northern portion of the Property is a source of COIs.

Roof Drain Storm Water Sampling

Roof drain storm water samples will be collected from three downspouts, one from each of the three large buildings, during two rainfall events (Figure B-2). The Basin 18 SSCE SAP describes the criteria for the two storm water sampling rainfall events.

Storm Water Pathway Erodible Soil Sampling

A composite soil sample will be collected from each of the areas around the following catch basins (Figure B-2):

- Catch basin in the northwest portion of the Property (Area 1);
- Catch basin on eastern edge of the Property near the former railroad underpass (Area 2);
- Two catch basins in the southeast portion of the Property (Area 3); and
- Catch basin the southwest portion of the Property (Area 4).

The objective of the surface soil samples is to assess whether erodible soil around the catch basins is a potential source of COIs to storm water runoff captured in the catch basins. The composite soil samples will be assembled by combining approximately equal volumes of three subsamples (five subsamples in Area 3) collected from the upper 3-inches at points equally distributed around the sampling area. Given the lack of representative sample points for storm water entering the catch basins, the surface soil samples will be considered the primary line of evidence regarding the potential for storm water runoff from the areas around the catch basins to be a material COI migration pathway.

Sample Laboratory Analysis

The separator solids, erodible soil samples, and the roof drain storm water samples will be analyzed for the Basin 18 COIs. As noted in the Basin 18 SSCE SAP, the Basin 18 COIs are:

- PCB aroclors;
- Dioxins;
- Butyltins;

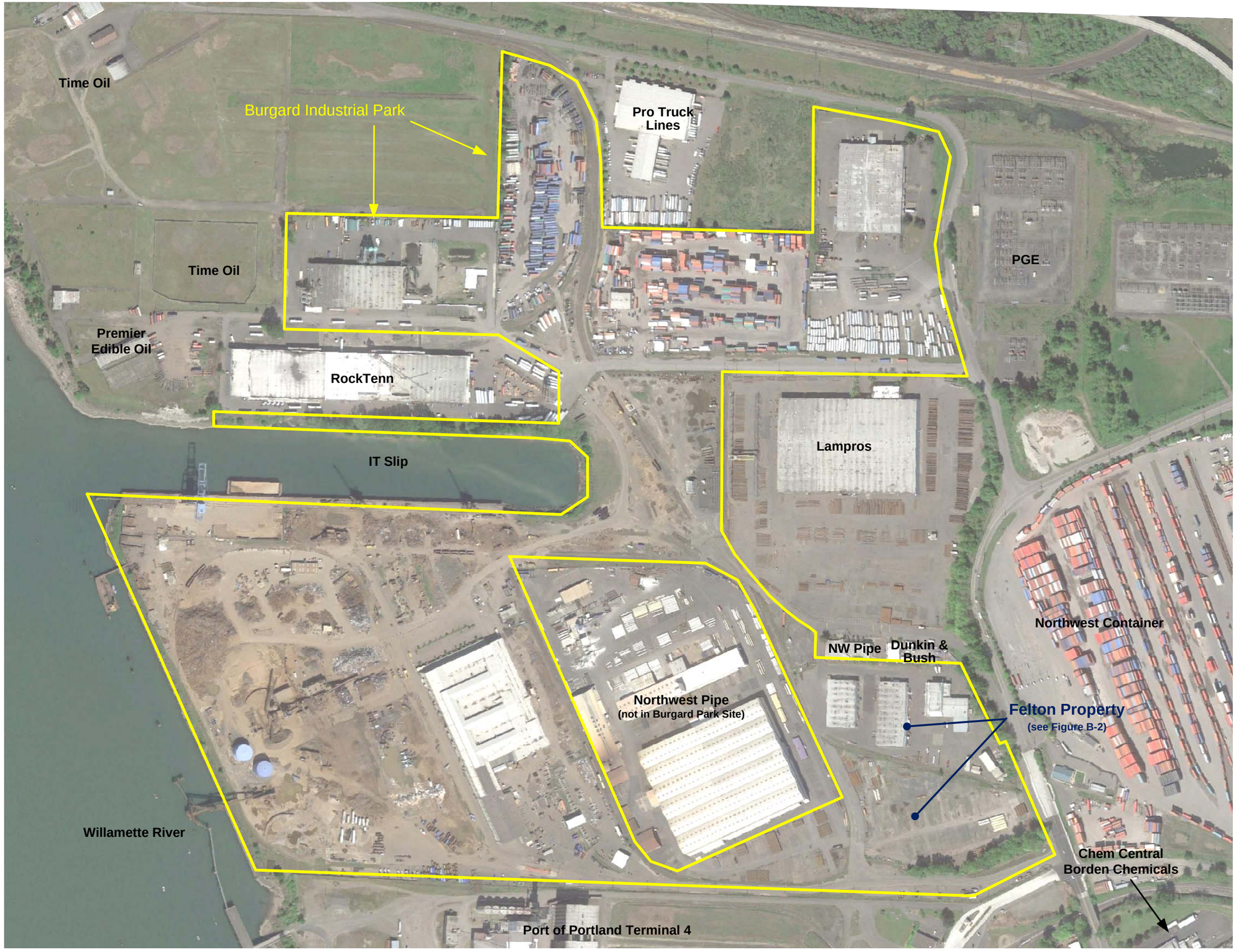
- Aluminum, antimony, arsenic, cadmium, chromium, copper, lead, manganese, mercury, nickel, silver, and zinc;
- Polycyclic aromatic hydrocarbons (PAHs);
- Total suspended solids (TSS) (water samples only); and
- Total organic carbon (TOC).

The Basin 18 SSCE SAP presents the specific analytical methods and associated detection limits for the COI analyses.

Attachments:

Figure B-1 Site Plan, Burgard Industrial Park
Figure B-2 Proposed Sample Locations – Felton Property

Figures



Base photograph April 2015

N

Approximate Scale

400 Feet

Figure B-1
Site Plan
Burgard Industrial Park
Portland, Oregon

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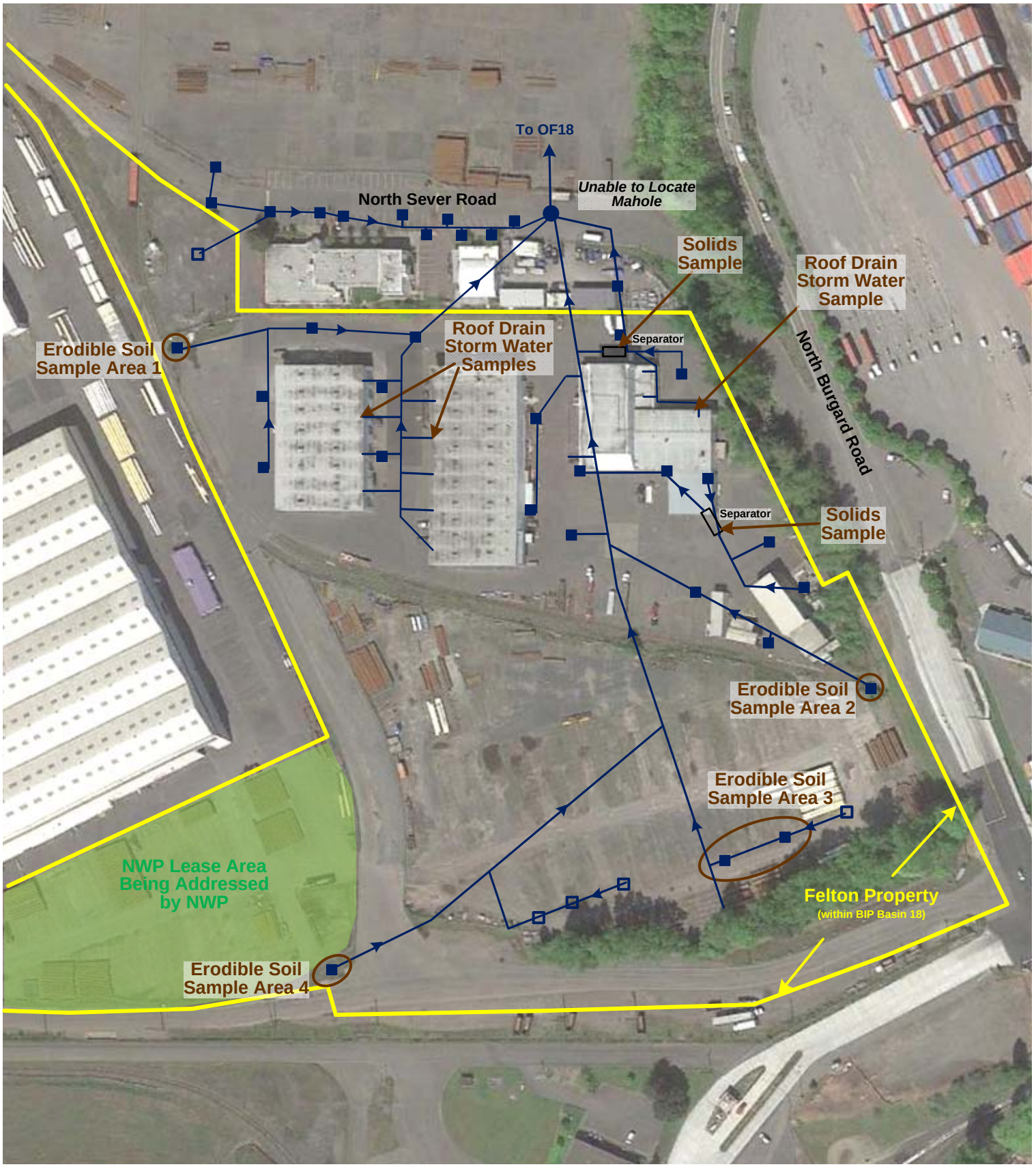

Base photograph April 2015

N

Approximate Scale

180 feet

- Manhole
- Catch Basin (current)
- Catch Basin (not found, historical)
- Buried Storm Water Line

Figure B-2
Proposed Sample Locations
Felton Property
Burgard Industrial Park
Portland, OR

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